



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,900	02/28/2002	Gerald Burt Kliman	RD-28364	9256

6147 7590 07/08/2003

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH CENTER
PATENT DOCKET RM. 4A59
PO BOX 8, BLDG. K-1 ROSS
NISKAYUNA, NY 12309

EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,900	KLIMAN ET AL.	
	Examiner	Art Unit	
	Joseph Waks	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-19,36,40 and 42-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-19,36,40 and 42-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 May 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The proposed drawing correction filed on May 29, 2003 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the discrete teeth as recited in claim 39 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 16 and 17** are rejected under 35 U.S.C. 102(b) as being anticipated by **Satomi et al. (JP 07336992 A)**.

Satomi et al. disclose in Figures 1, 2, and 6-8 stator windings W1-W10 comprising a wound shape designed to provide space for a desired tooth tip shape, a laminated stator yoke 34 situated around the stator windings, wherein laminations forming the laminated stator yoke

comprise the yoke and teeth 33 extending therefrom, molded composite tooth tips 31 between respective windings and in contact with the teeth of the laminated stator yoke and the key notches 35.

5. **Claim 40** is rejected under 35 U.S.C. 102(b) as being anticipated by **Rosenberry (US 4,392,072)**.

Rosenberry discloses a machine stator having stator windings 13, 13A, 13B around respective stator teeth 3-6 and a stator yoke 2B radially surrounding and coupled to the stator teeth, wherein the stator yoke is a composite stator yoke (Re column 3, lines 24-27)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 18 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over by **Satomi et al. (JP 07336992 A)** in view of **Bansai et al. (US 4,994,700)**.

Satomi et al. disclose the stator essentially as claimed. However, **Satomi et al.** do not disclose corrugated insulation around at least portions of the windings.

Bansai et al. disclose in Figure 4 a corrugated slot liner 34' surrounding windings 30 for the purpose of biasing the coil against movement in the slot.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the stator as taught by **Satomi et al.** and to provide corrugated liner around at least portions of the windings as taught by **Bansai et al.** for the purpose of

biasing the coil against movement in the slot. It would have been further obvious to make the liner with electrically insulating properties to prevent electric leaks from the windings to the magnetic yoke, since slot liners of electrically insulating material are well known in the art of electric machines (Re Rosen berry's Figure 3, element 14B for example).

8. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ryder et al. (US 2,607,816)** in view of **Baronosky et al. (US 5,866,965)**.

Ryder et al. disclose a machine stator comprising windings 28 around laminated stator teeth 12 and the stator yoke 14, the windings include the wider winding portion closer to the yoke than the narrower portion. However, **Ryder et al.** do not disclose the stator windings comprising a flat wound stator winding.

Baronosky et al. disclose the machine stator including the flat wound stator winding 15 for the purpose of maximizing the winding density, thus maximizing the strength of the magnetic field generated by the stator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the stator as taught by **Ryder et al.** and to provide the stator windings comprising a flat wound stator winding as taught by **Baronosky et al.** for the purpose of maximizing the winding density, thus maximizing the strength of the magnetic field generated by the stator.

9. **Claims 42-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rosenberry (US 4,392,072)** in view of **Ichiyama et al. (US 4,613,842)**.

Rosenberry discloses the stator essentially as claimed. However, **Rosenberry** does not disclose the stator yoke comprises a material having azimuthally oriented grain, and/or the stator teeth comprise material having radially oriented grain.

Ichiyama et al. disclose in Figures 8B-8D the stator yoke 30a comprises a material having an azimuthally oriented grain, and/or the stator teeth 30b comprise material having a radially oriented grain for the purpose of reducing the watt loss of both the yoke and the teeth regions.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the stator as taught by **Rosenberry** and to provide the stator yoke comprises a material having azimuthally oriented grain, and/or the stator teeth comprise material having radially oriented grain as taught by **Ichiyama et al.** for the purpose of reducing the watt loss of both the yoke and the teeth regions.

Response to Arguments

10. Applicant's arguments filed May 23, 2003 have been fully considered but they are not persuasive.

Regarding drawings, examiner could not identified any dashed lines in original Figure 13 or changes of the dashed lines to solid lines in the new Figure 13. Moreover, the original application contained only 14 figures. Therefore, there is no old Figure 15.

Regarding specification, paragraph 37 describes the stator teeth comprising discrete teeth (typically laminated), tooth connectors 617 (typically composite) provided between the stator teeth and, alternatively. The drawings still don't clearly identify the discrete teeth.

Regarding claim 36, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this particular case, **Ryder et al.** teach the windings including the wider winding portion closer to the yoke than the narrower portion. Figure 3 clearly shows these features being clearly directed to filling the space between teeth 18. **Baronosky et al.** teach the flat wound winding for the purpose of maximizing the winding density. In combination **Ryder et al.** and **Baronosky et al.** teach the invention as claimed.

Re claim 40, examiner directs applicant's attention to column 3, lines 24-27 where **Rosenberry** discloses the composite stator yoke.

11. Applicant's arguments with respect to claim 16 have been considered but are moot in view of the new ground(s) of rejection.

Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the

Application/Control Number: 09/683,900

Page 7

Art Unit: 2834

organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
July 6, 2003